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AUTHOR Owens, Thomas R.; Kneedler, Peter
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ABSTRACT

The "Eager to Learn" inservice training television series was designed to help teachers use, as part of their individual teaching strategies, seven enabling behaviors: structuring, problem focusing, accepting, clarifying, facilitating, deliberate, silence, and modeling. Over 200 elementary school teachers participated in the series which consisted of six half-hour televised lessons. The evaluation design analyzed teacher comprehension of the behaviors, their attitudes toward them, their use of the behaviors in the classroom, and the students' attitudes toward teacher-student interaction. The evaluation was conducted by questionnaire. The results of the evaluation showed that the series had demonstrated its ability to change teachers' understanding of the enabling behaviors as well as to significantly increase the frequency with which four of the seven behaviors were used in the classroom. (MC)

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EVALUATION OF THE EFFECTS OF THE EAGER TO LEARN TEACHER INSERVICE TELEVISION SERIES

By

Thomas R. Owens

and

Peter Kneedler

Center for Planning and Evaluation
Santa Clara County Office of Education
1110 North Tenth Street
San Jose, California 95112

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This paper reports on the evaluation of a teacher inservice television series entitled, Eager to Learn. These six half-hour television lessons, together with an accompanying teacher guide, were produced by the Santa Clara County (California) Office of Education, University of California at Santa Cruz - Extension and KTEH Channel 54, a local educational television station. The teacher guide (1971) is a 74-page document patterned loosely on a programmed text basis. The guide was intended to motivate and also provide supplementary information that could continuously reinforce and evaluate the participant during the course of the program. The series was designed to help teachers use as a part of their individual teaching strategies seven enabling behaviors: structuring, problem focusing, accepting, clarifying, facilitating, deliberate silence and modeling.

A considerable amount of research has recently been directed toward the review of major theories on teaching strategies. In a paper by A. L. Costa, et al., (1971) seven teaching behaviors were found to be present in four teaching strategies that were analyzed--inquiry, self-enhancing education, role-playing, and Taba's higher level thinking abilities. These strategies contain behaviors that seem to create the basic essential conditions that enable students to learn. A brief description of these enabling objectives taken from the Eager to Learn Teacher manual follows:

> Structuring--a behavior in which the teacher establishes ground rules--the freedoms and limitations under which the students will be expected to perform.
>
> Problem Focusing--a behavior in which the teacher directs attention to a problem that needs solving or an inconsistency that needs resolution. It is frequently in the form of a question.
>
> Accepting--a behavior in which the teacher receives all student responses non-judgmentally, permitting the students to determine through exploration the correctness or incorrectness of their ideas.
>
> Facilitating the Acquisition of Data--a behavior in which the teacher makes available resources from which students can gather information; this information resource can be the teacher himself.

Silence--a behavior in which the teacher consciously permits and sustains periods in the classroom in which no one speaks; these periods give the students time in which to do their own problem solving.

Clarifying--a behavior in which the teacher probes for more information from the student in order to make both the teacher's and student's understanding clearer.

Modeling--a behavior in which the teacher consciously makes his actions consistent with his teaching in order to create an honest environment in which students can perform.

Evaluation of the Eager to Learn series focused upon its effect in: 1) increasing teachers' understanding of the seven enabling teacher behaviors presented; 2) improving teachers' attitudes concerning the importance of these behaviors; 3) encouraging teachers to use the behaviors effectively in their classrooms; and 4) improving students' attitudes toward teacher-student interactions.

METHOD

The evaluation design developed and implemented by the Center for Planning and Evaluation, a department within the Santa Clara County Office of Education, called for some teachers to observe the inservice series without faculty follow-up discussions, others to observe the series but also participate in planned weekly faculty discussion groups, and a third group of teachers who neither watched nor discussed the series. Random assignment of teachers to groups was not possible in this study. Over 200 teachers from 24 school districts in northern California participated in watching the Eager to Learn series, many of whom received college credit from the University of California at Davis or at Santa Cruz. Evaluation was conducted at two levels. First, a pre and post inservice questionnaire was administered to teachers observing the telecast. In addition to a background information section, teachers rated the actual and desired frequency with which they used or would like to have used each of the seven enabling behaviors and answered items requiring them to identify illustrations of the seven behaviors. Second, a sample of 18 elementary school teachers were selected for classroom

observations of teacher behaviors and their effects upon students. Of the 18 teachers observed once before and once after the Eager to Learn six-week series at 30 second intervals by trained independent observers for 30 minutes, nine observed the films but did not participate in organized weekly faculty discussions, six both observed and discussed the films weekly, and four neither observed nor discussed the films and served as a control group. Inter-observer reliability was calculated using R. Spaulding's (1970) procedures and averaged .84 on the observation instrument designed to record the teacher behaviors. For each of the teachers observed who taught grades 3 to 6, a Student Attitude Index was also administered to her students on a pre-post basis. This index contained several items for each of the teacher behaviors being considered and asked the children to state, "agree, disagree, or not sure" to 18 statements. This instrument was read to each class by the researcher so as to eliminate the bias of the reading ability of children. In order to encourage more honest responses, children were asked not to write their name but only their class identification on the front of the Index. Arrangements were made for the teachers to leave the classrooms during the administration of the Index.

RESULTS

The participants in the Eager to Learn study were rather representative of elementary teachers throughout the state although a majority of them taught in middle income areas. Ninety-three percent were women. Fifteen percent received their teaching credential less than a year ago, 50 percent received it within the last five years, and 23 percent received it over 11 years ago. Although participants had graduated from 43 different colleges, the majority were alumni of the California State University, Sacramento and California State University, San Jose. On both the pre and post inservice training questionnaire, participants were presented with a definition of each of the seven enabling behaviors and were asked to

correctly match the behavior with illustrations given. They were also asked to respond to each behavior in terms of how frequently they would like to use the behavior and how frequently they actually used the behavior during a typical week. Table 1 presents the percentage of 110 teachers completing both the pre and post questionnaire who were able to correctly identify examples of the seven enabling behaviors on the pre and post teacher questionnaire. On the pre questionnaire, the behavior of accepting was easiest for teachers to identify and facilitating was the most difficult for them to identify. For each behavior to be identified, the teachers who discussed the films after viewing them made the same or greater gains than those made by teachers who viewed the films without participating in an organized discussion.

Table 2 presents the results from the pre and post questionnaire regarding the teachers' self-reported actual and desired frequency of use of each behavior. An analysis of variance indicated that although the difference in totals for the desired use was not significant, the difference in totals for the reported actual use was significant at the .05 level of confidence.

TABLE 1

PERCENTAGE OF TEACHERS CORRECTLY IDENTIFYING EXAMPLES OF THE SEVEN ENABLING BEHAVIORS ON THE PRE AND POST EAGER TO LEARN TEACHER QUESTIONNAIRE

1.	Structuring	pre	61	64
		post	88	91
		gain	27	27
2.	Problem Focusing	pre	72	80
		post	92	90
		gain	20	10
3.	Accepting	pre	92	94
		post	97	97
		gain	5	3
4.	Clarifying	pre	77	76
		post	100	98
		gain	23	23
5.	Facilitating	pre	44	51
		post	*	
		gain		
6.	Silence	pre	77	77
		post	100	93
		gain	23	16
7.	Modeling	pre	87	90
		post	100	97
		gain	13	7

*Not recorded

TABLE 2

RESULTS FROM THE PRE AND POST EAGER TO LEARN TEACHER QUESTIONNAIRE REGARDING DESIRED AND ACTUAL FREQUENCY OF USE OF THE ENABLING BEHAVIORS

		Desired Frequency				Actual Frequency			
		Discussion Group (N=27)		Non-Discussion Group (N=91)		Discussion Group (N=27)		Non-Discussion Group (N=91)	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1. Structuring	pre	1.63	.93	2.04	1.22	1.35	.69	1.64	.95
	post	1.11	.32	1.14	.35	1.28	.54	1.67	.57
2. Problem Focusing	pre	1.59	.89	1.55	.88	1.58	.76	1.75	.92
	post	1.19	.40	1.21	.51	1.04	.20	1.23	.58
3. Accepting	pre	1.19	.48	1.31	.68	1.92	.80	1.85	1.00
	post	1.22	.42	1.49	.79	1.00	.00	1.10	.43
4. Clarifying	pre	1.07	.27	1.18	.56	1.62	.85	1.53	.81
	post	1.11	.42	1.24	.57	1.04	.20	1.08	.27
5. Facilitating	pre	1.22	.51	1.30	.76	1.58	1.00	1.71	.99
	post	1.52	.98	1.38	.58	1.15	.37	1.12	.47
6. Silence	pre	1.19	.48	1.51	.92	1.31	1.06	1.93	1.14
	post	1.30	.54	1.34	.75	1.04	.20	1.09	.36
Total	pre	7.89	3.56	8.89	4.50	9.36		10.41	
	post	7.45	2.59	7.80	3.23	6.55		7.29	

1 Behaviors were rated as: 1 = almost daily; 2 = at least twice a week; 3 = at least weekly; 4 = less than once a week

The independent classroom observation record developed for use in this evaluation contained three sections. The first part recorded the frequency and use of each of the enabling objectives except for modeling which was considered inappropriate to conceptualize on a frequency basis. The second section recorded the observer's rating on a three-point scale of how accurate the teacher was in using each behavior. Section three recorded the observer's rating on a three-point scale of how positive students' responses were to the teacher's use of each behavior. A repeated measures analysis of variance was run on the pre and post observed frequencies of each behavior recorded. The results indicated no significant difference because the within cell variance was too high. This was due to the fact that over a thirty minute period individual teachers varied tremendously in the frequency with which they used the behaviors. A Friedman two-way analysis of variance was then run and revealed statistically significant differences ($p < .05$) in increased observed frequency favoring the Eager to Learn teachers on four behaviors: problem focusing, accepting, clarifying and facilitating. The ratings of teacher accuracy on the use of the behaviors and students' responses showed improvement as a result of the inservice but the changes were not statistically significant.

Intercorrelations were recorded for the frequency of observed teacher use of the enabling behaviors and are displayed in Table 3. Three intercorrelations were statistically significant. The behavior of structuring correlated negatively with that of problem focusing and of accepting. Facilitating correlated negatively with the teacher's deliberate use of silence.

TABLE 3

INTERCORRELATIONS OF POST TEACHER OBSERVATIONS IN TERMS OF FREQUENCY OF OBSERVED BEHAVIORS (N = 22)

	Structuring	Problem Focusing	Accepting	Clarifying	Facilitating	Silence
Structuring						
Problem Focusing	-38*					
Accepting	-.54**	.07				
Clarifying	-.11	-.30	.05			
Facilitating	.21	.12	.29	-.20		
Silence	.04	-.25	.02	.08	-.36*	

* = correlation significant at the .05 level
** = correlation significant at the .01 level

The Student Attitude Index showed no statistically significant growth in student recognition of teachers' use of the enabling objectives except for one item relating to acceptance which stated: "My teacher often asks our class how we feel about things." In this case, the change was significant at the .05 level using a t test.

DISCUSSION

The Eager to Learn teacher inservice television series has demonstrated its ability to change teachers' understanding of the enabling behaviors as well as to significantly increase the frequency with which four of the seven behaviors were used in the classroom. However, it did not change substantially the perceptions and attitudes of students in the classes involved. Part of this may have been due to the fact that the series lasted only six weeks. An important finding of this study was the added increase in useage of the enabling behaviors when teachers also participated in weekly faculty discussion groups during the six-week period. It is anticipated that future research based on the use of this series with a wider audience will allow for follow-up observations after the series has terminated in order to determine the extent to which the change in teacher use of the enabling behaviors is permanent.

The significant negative correlations between the behavior of structuring and that of problem focusing and of accepting are meaningful in that they indicate that enabling behaviors such as structuring can be overworked and can have negative side effects. This raises an important issue for future research that needs to focus on the optimal range of time during a class period that teachers might profitably spend using any one enabling behavior.

At the present time, the Eager to Learn series is being used throughout the State of California through course credit offered by the University of California Extension divisions. Further research is underway to determine the impact of

the Eager to Learn series as a strategy to improve teachers' ability to relate with and counsel students.

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